

# Claremont 27691

## Route 12A over the Sugar River



# Introductions

- **David Scott, PE**
  - NHDOT Bureau of Bridge Design
    - Design Chief
- **Jason Tremblay, PE**
  - NHDOT Bureau of Bridge Design
    - Senior Engineer
- **Anthony Weatherbee, PE, SE**
  - NHDOT Bureau of Bridge Design
    - Project Engineer
- **Evan C Lowell, PE**
  - TranSystems Corp.
    - Project Consultant
- **Teresa K Sandell, PE**
  - TranSystems Corp.
    - Project Consultant



# Claremont 27691



**Bridge Rehabilitation – Route 12A over the Sugar River  
130 feet south of intersection with Route 12**

# Project Purpose

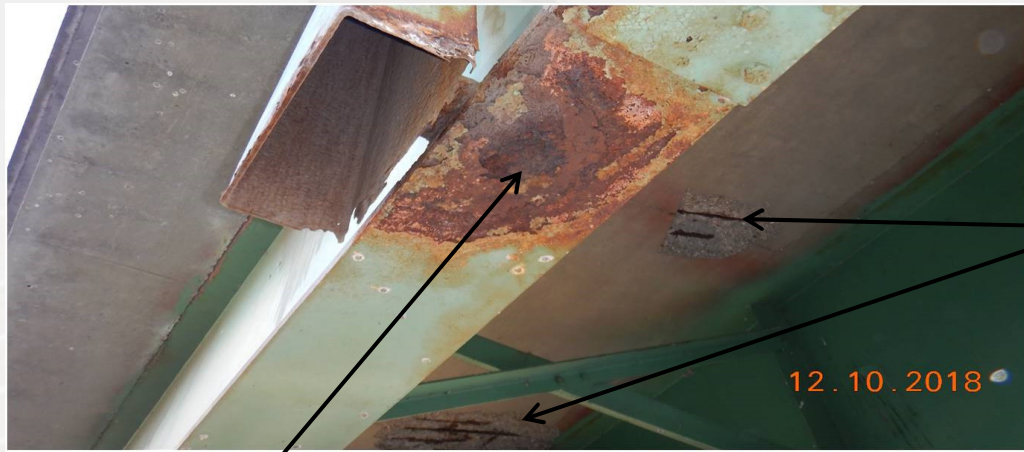
- Bridge Rehabilitation
  - Extends the useful life of the bridge
  - Removes the bridge from the State Bridge Red List (currently no. 86)

# Bridge Information

- Three span continuous
- 276 foot Welded Steel Plate Girder
- Built in 1967 and rehabilitated in 1991
- 32'-8" wide
- 30 foot rail to rail and 28 foot curb to curb
- Bridge is coded as Scour Critical



# Project Need



**Spalled Deck  
w/ Exposed  
Rebar**

**Heavy Rust on Bottom  
Flange of Girder**

**Repair Patch  
Exhibiting  
Delamination**



# Project Need



**Heavy Rust on  
Bottom Flange of  
Girder**

**Heavy Rust on  
Bearing**





# Project Need



**Delamination  
and Spalling on  
North Abutment**

**Tree Debris  
at the Pier**





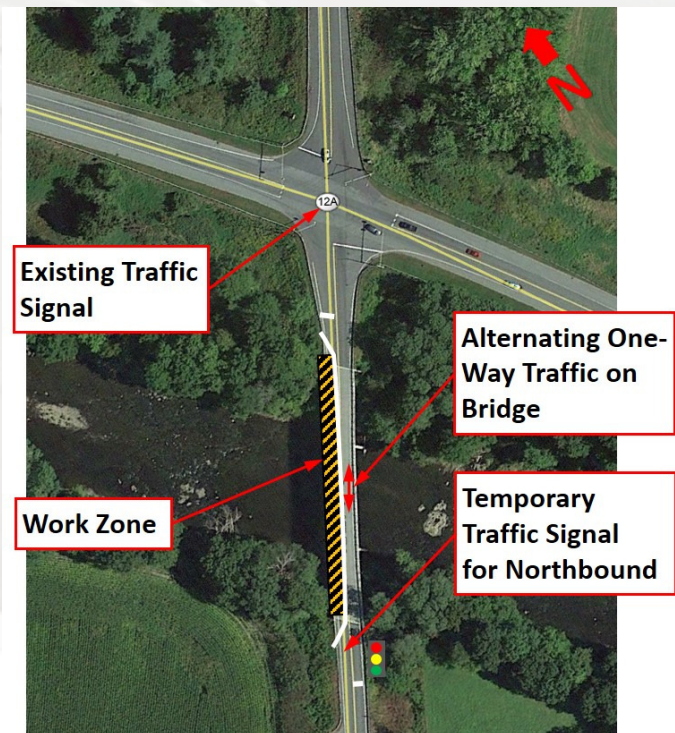
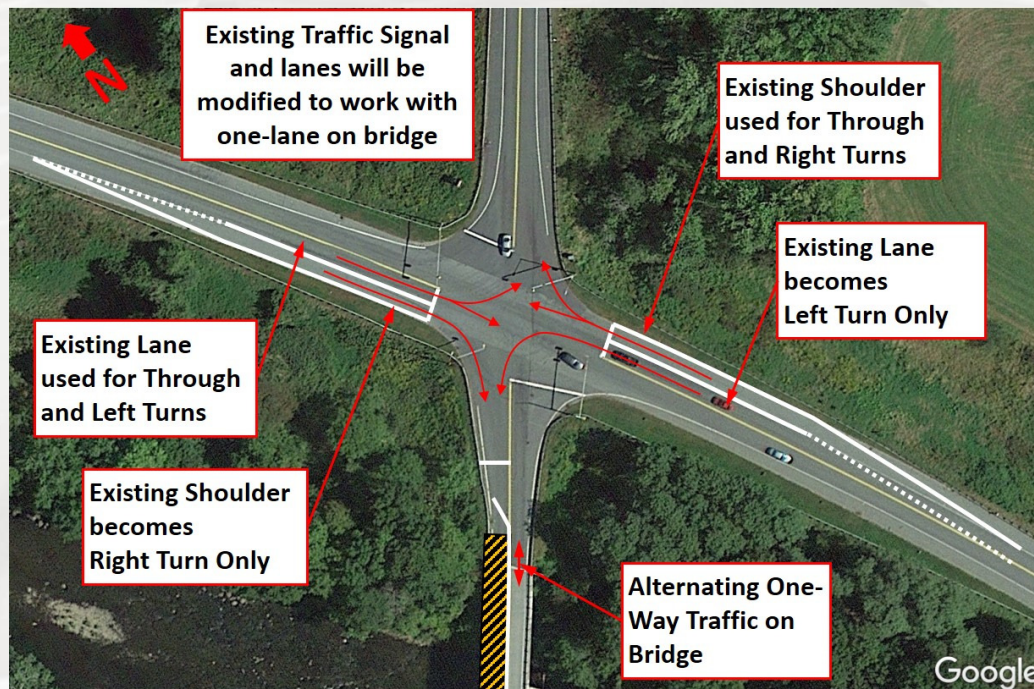
# Project Scope

- Replace bridge deck
- Replace expansion joint
- Replace bearings
- Replace superstructure
- Replace bridge and approach rail
- Install scour countermeasures

# Traffic Control

## Phased Construction

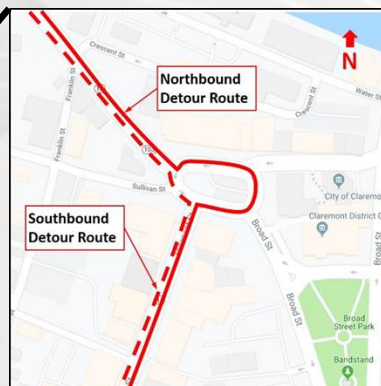
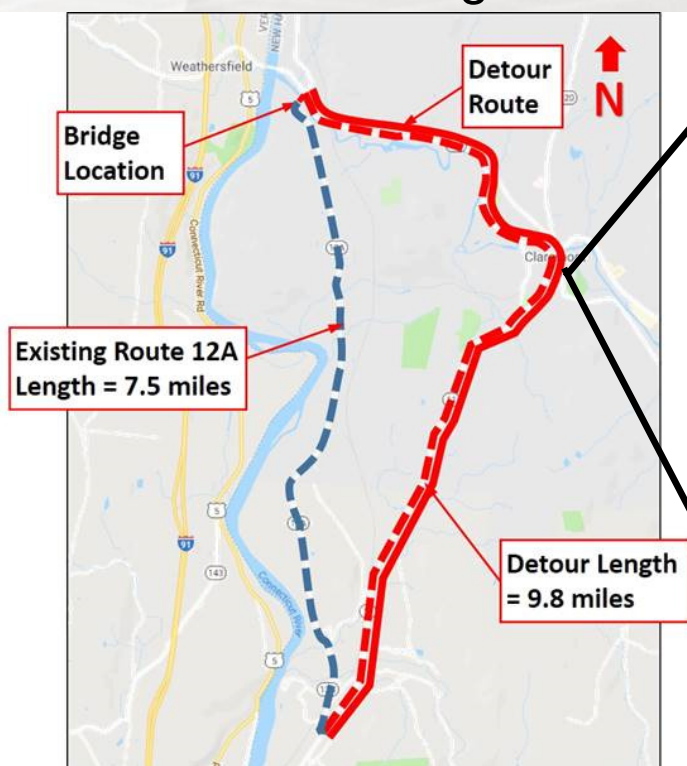
- Alternating one-way traffic
- Temporary traffic signals
- Only 70' between Route 12 intersection and temporary signal





# Other Traffic Control Alternatives

- Full bridge closure (Northbound and Southbound detour)
  - Conventional or Accelerated
- Partial closure
  - One way traffic with SB or NB detour
- Total detour length 17.3 miles



## **Traffic Advisory Committee – 10/30/19**

- Concerns with Grissom Lane shortcut
- Extensive truck traffic
  - Canam-Bridges
  - Industrial Park
  - Farmer on both sides of Sugar River
- Pleasant Street construction

## **Claremont City Council – 11/13/19**

- Desired to have alternating one-way traffic due to equal traffic flow in both directions



# Anticipated Project Schedules

- Advertise for bids
- Likely two construction seasons

# Discussion Topics

- Traffic Impacts (Phased or Full Closure & Detour)
- Pedestrian or Bike Usage
- Intersection/rotary Concerns
- Safety Concerns with Existing Situation
- Special Town Events
- Abutters
- Emergency Response Routes
- School Schedule and Bus Routes
- Preferred Construction Timing



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Thank You.  
Questions?

# Additional Traffic Details

Intersection		AM Peak					PM Peak				
		v/c	Delay (sec)	LOS	50th % Queue (ft)	95th % Queue (ft)	v/c	Delay (sec)	LOS	50th % Queue (ft)	95th % Queue (ft)
Route 12A & Route 12 (north of bridge)		29.8 C					52.8 D				
Route 12A NB	NB Left/Through/Right	0.83	80.0	E	51	94	0.85	95.5	F	70	127
Route 12A SB	SB Left/Through/Right	0.48	42.7	D	28	68	0.84	92.2	F	99	197
Route 12 EB	EB Left/Through/Right	0.51	21.8	C	121	268	0.98	62.9	E	400	835
Route 12 WB	WB Left/Through/Right	0.68	25.6	C	131	239	0.76	33.6	C	167	267